

TOWARDS THE DEVELOPMENT OF PRACTICAL TOOLS FOR INTEGRATED ASSESSMENTS OF HEALTH EFFECTS OF TRANSPORT POLICIES: A CONCEPTUAL FRAMEWORK

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Background and Aims: Transport policies widely affect the environment and public health. Some even specifically address issues outside the transport domain, i.e. promotion of active travel to increase physical activity.

Transport and urban planners would benefit from practical tools to navigate and evaluate complex interrelations of health-related factors affected by transport, which would improve project assessments over current state of the art.

Methods: Intending to complement evidence-based modeling and feasibility-focused tool development, we created a conceptual map of health-relevant factors affected by transport policies and their relationships, based primarily on plausibility considerations and reviews of relevant publications. To ensure breadth, data availability or quantitative evidence were not requirements for inclusion in the map. Additionally, transport and health indicators from existing indicator systems were identified.

Results: The resulting conceptual map consists of a classification scheme for transport policies, and of pathways from policy targets to health endpoints. The map distinguishes two main target domains of policies: travel behavior and physical aspects of transport. Five main pathways link these to health: exposure to air pollution and noise, injury risk, impacts on physical activity and access to health-relevant goods, services and opportunities. Health endpoints include morbidities, injuries and mortality.

The map identified and linked over 350 factors. In addition, 40 existing indicators were identified, mainly on physical aspects of traffic.

Conclusions: The map showed that existing indicators address only limited aspects of the transport-health field. Although not comprehensive, the map assists the development of integrated evaluation tools for transport policies, as it visually digests the complexity of the matter, facilitating the identification of causal pathways of adverse and beneficial health effects of transport. Similar future efforts to dissect complex transport-health relationships would benefit from the use of interactive electronic applications, which may improve user-friendliness, which is often limiting the practical application of such tools.